

I. Amendments to the Claims

Please amend the claims as follows with the following  
clean versions of the claims in accordance with 37 CFR §  
1.121; marked-up versions of the claims are presented in the  
5 following section.

Clean version of amended claims:

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1. (Amended) A method for deleting entries from a  
10 directory in which directory information is stored in a set of  
database tables, comprising the steps of:

receiving a request to delete a directory entry;

responsive to receiving the request to delete a directory  
entry, determining to tag the directory entry for subsequent  
15 deletion by setting an attribute of the directory entry to a  
predetermined value;

updating a first database table storing the attribute of  
the directory entry;

periodically searching for tagged directory entries in  
20 the first database table during a cleanup process interval;  
and

deleting references to the tagged directory entries  
throughout the set of database tables.

2. (Amended) The method as described in claim 1 wherein  
25 the directory entry is tagged by setting its creation time  
attribute to a given value.

3. The method as described in claim 2 wherein the given  
30 value is a null value.

4. (Amended) The method as described in claim 1, further including the steps of:

performing a search for directory entries that satisfy a search query; and

5 excluding tagged directory entries from search results that otherwise satisfy the search query.

5. (Amended) The method as described in claim 4 wherein the step of excluding tagged directory entries includes  
10 modifying an SQL query to exclude rows having a null change creation.

6. The method as described in claim 1 wherein the directory is a Lightweight Directory Access Protocol (LDAP) directory  
15 service and the database tables are managed by a relational database management service.

7. (Amended) The method as described in claim 1 wherein the first database table is an entry table.

20 8. The method as described in claim 7 wherein the set of database tables includes at least one attribute table storing information about an attribute.

9. (Amended) A method for deleting entries from a directory in which directory information is stored in a set of database tables, comprising the steps of:

receiving a request to delete a directory entry;

responsive to receiving the request to delete a directory entry, determining to tag the directory entry for subsequent deletion by setting an attribute of the directory entry to a predetermined value;

updating a first database table storing the attribute of the directory entry;

responsive to a search for directory entries that satisfy a search query, excluding tagged directory entries from search results that otherwise satisfy the search query;

periodically searching for tagged during entries during a cleanup process interval; and

deleting references to the tagged directory entries throughout the set of database tables.

10. The method as described in claim 9 wherein the directory entry is tagged by setting its creation time to a given value.

11. The method as described in claim 10 wherein the given value is a null value.

12. (Amended) The method as described in claim 9 wherein the first database table is an entry table.

13. The method as described in claim 12 wherein the set of database tables includes at least one attribute table storing information about an attribute.

14. (Amended) A method for searching a database from a directory service, comprising the steps of:

receiving a search query;

responsive to a search for directory entries that satisfy  
5 the search query, excluding given directory entries from  
search results that otherwise satisfy the search query,  
wherein a given directory entry is a directory entry that has  
been tagged for deletion by setting an attribute of the given  
directory entry to a predetermined value; and

10 returning the search results.

15 15. The method as described in claim 14 where in the  
directory service is a Lightweight Directory Access Protocol  
(LDAP) directory service and the database tables are managed  
by a relational database management service.

AI  
16. (Amended) A computer program product in a computer-readable medium for deleting entries from a directory in which directory information is stored in a set of database tables, comprising:

5 means for receiving a request to delete a directory entry;

means for determining, responsive to receiving the request to delete a directory entry, to tag the directory entry for subsequent deletion by setting an attribute of the directory entry to a predetermined value;

10 means for updating a first database table storing the attribute of the directory entry;

means for periodically searching for tagged directory entries in the first database table during a cleanup process interval; and

15 means for deleting references to the tagged directory entries throughout the set of database tables.

17. The computer program product as described in claim 16, further including:

20 means responsive to a search for directory entries that satisfy a search query for excluding tagged entries from search results that otherwise satisfy the search query.

25 18. The computer program product as described in claim 17 wherein the search query is a Lightweight Directory Access Protocol (LDAP) directory service query.

AI 5 19. (Amended) A directory service, comprising:  
a directory organized as a naming hierarchy having a  
plurality of entries each represented by a unique identifier;  
a relational database management system having a backing  
store for storing directory data in a set of database entries;  
and

means for deleting entries from the directory,  
comprising:

10 means for determining, responsive to receiving the  
request to delete a directory entry, to tag the directory  
entry for subsequent deletion by setting an attribute of  
the directory entry to a predetermined value;

means for updating a first database table storing  
the attribute of the directory entry;

15 means for periodically searching for tagged  
directory entries in the first database table during a  
cleanup process interval; and

20 means for deleting references to the tagged  
directory entries throughout the set of database tables;  
and

25 means responsive to a search for directory entries  
that satisfy a search query for excluding tagged  
directory entries from search results that otherwise  
satisfy the search query.

20. The directory service as described in claim 19 wherein  
the directory is compliant with the Lightweight Directory  
Access Protocol (LDAP).